

0590
1023

#5

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/903,199

DATE: 10/29/2001
TIME: 15:44:03

Input Set : A:\Rih32d41.app
Output Set: N:\CRF3\10292001\I903199.raw

3 <110> APPLICANT: Wands, Jack R.
4 de la Monte, Suzanne M.
5 Ince, Nedim
6 Carlson, Rolf I.
8 <120> TITLE OF INVENTION: DIAGNOSIS AND TREATMENT OF MALIGNANT NEOPLASMS
10 <130> FILE REFERENCE: 21486-032 DIV4
12 <140> CURRENT APPLICATION NUMBER: 09/903,199
13 <141> CURRENT FILING DATE: 2001-07-11
15 <150> PRIOR APPLICATION NUMBER: 09/436,184
16 <151> PRIOR FILING DATE: 1999-11-08
18 <160> NUMBER OF SEQ ID NOS: 9
20 <170> SOFTWARE: PatentIn Ver. 2.1

ENTERED

22 <210> SEQ ID NO: 1
23 <211> LENGTH: 36
24 <212> TYPE: PRT
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: Description of Artificial Sequence: Consensus ✓
29 EGF-like domain
31 <220> FEATURE:
32 <221> NAME/KEY: VARIANT
33 <222> LOCATION: (2)..(8)
34 <223> OTHER INFORMATION: Wherein Xaa is any amino acid ✓
36 <220> FEATURE:
37 <221> NAME/KEY: VARIANT
38 <222> LOCATION: (10)..(13)
39 <223> OTHER INFORMATION: Wherein Xaa is any amino acid. ✓
41 <220> FEATURE:
42 <221> NAME/KEY: VARIANT
43 <222> LOCATION: (15)..(24)
44 <223> OTHER INFORMATION: Wherein Xaa is any amino acid. ✓
46 <220> FEATURE:
47 <221> NAME/KEY: VARIANT
48 <222> LOCATION: (26)
49 <223> OTHER INFORMATION: Wherein Xaa is any amino acid. ✓
51 <220> FEATURE:
52 <221> NAME/KEY: VARIANT
53 <222> LOCATION: (28)..(35)
54 <223> OTHER INFORMATION: Wherein Xaa is any amino acid.

56 <400> SEQUENCE: 1
W--> 57 Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa
58 1 5 10 15
W--> 60 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Cys Xaa Xaa Xaa Xaa Xaa
61 20 25 30
W--> 63 Xaa Xaa Xaa Cys
64 35
67 <210> SEQ ID NO: 2

RAW SEQUENCE LISTING

DATE: 10/29/2001

PATENT APPLICATION: US/09/903,199

TIME: 15:44:03

Input Set : A:\Rih32d41.app

Output Set: N:\CRF3\10292001\I903199.raw

68 <211> LENGTH: 758

69 <212> TYPE: PRT

70 <213> ORGANISM: Homo sapiens

72 <400> SEQUENCE: 2

```

73 Met Ala Gln Arg Lys Asn Ala Lys Ser Ser Gly Asn Ser Ser Ser Ser
74   1           5           10           15
76 Gly Ser Gly Ser Gly Ser Thr Ser Ala Gly Ser Ser Ser Pro Gly Ala
77           20           25           30
79 Arg Arg Glu Thr Lys His Gly Gly His Lys Asn Gly Arg Lys Gly Gly
80           35           40           45
82 Leu Ser Gly Thr Ser Phe Phe Thr Trp Phe Met Val Ile Ala Leu Leu
83           50           55           60
85 Gly Val Trp Thr Ser Val Ala Val Val Trp Phe Asp Leu Val Asp Tyr
86   65           70           75           80
88 Glu Glu Val Leu Gly Lys Leu Gly Ile Tyr Asp Ala Asp Gly Asp Gly
89           85           90           95
91 Asp Phe Asp Val Asp Asp Ala Lys Val Leu Leu Gly Leu Lys Glu Arg
92           100          105          110
94 Ser Thr Ser Glu Pro Ala Val Pro Pro Glu Glu Ala Glu Pro His Thr
95           115          120          125
97 Glu Pro Glu Glu Gln Val Pro Val Glu Ala Glu Pro Gln Asn Ile Glu
98           130          135          140
100 Asp Glu Ala Lys Glu Gln Ile Gln Ser Leu Leu His Glu Met Val His
101 145          150          155          160
103 Ala Glu His Val Glu Gly Glu Asp Leu Gln Gln Glu Asp Gly Pro Thr
104           165          170          175
106 Gly Glu Pro Gln Gln Glu Asp Asp Glu Phe Leu Met Ala Thr Asp Val
107           180          185          190
109 Asp Asp Arg Phe Glu Thr Leu Glu Pro Glu Val Ser His Glu Glu Thr
110           195          200          205
112 Glu His Ser Tyr His Val Glu Glu Thr Val Ser Gln Asp Cys Asn Gln
113           210          215          220
115 Asp Met Glu Glu Met Met Ser Glu Gln Glu Asn Pro Asp Ser Ser Glu
116 225          230          235          240
118 Pro Val Val Glu Asp Glu Arg Leu His His Asp Thr Asp Asp Val Thr
119           245          250          255
121 Tyr Gln Val Tyr Glu Glu Gln Ala Val Tyr Glu Pro Leu Glu Asn Glu
122           260          265          270
124 Gly Ile Glu Ile Thr Glu Val Thr Ala Pro Pro Glu Asp Asn Pro Val
125           275          280          285
127 Glu Asp Ser Gln Val Ile Val Glu Glu Val Ser Ile Phe Pro Val Glu
128           290          295          300
130 Glu Gln Gln Glu Val Pro Pro Glu Thr Asn Arg Lys Thr Asp Asp Pro
131 305          310          315          320
133 Glu Gln Lys Ala Lys Val Lys Lys Lys Lys Pro Lys Leu Leu Asn Lys
134           325          330          335
136 Phe Asp Lys Thr Ile Lys Ala Glu Leu Asp Ala Ala Glu Lys Leu Arg
137           340          345          350
139 Lys Arg Gly Lys Ile Glu Glu Ala Val Asn Ala Phe Lys Glu Leu Val

```

RAW SEQUENCE LISTING

DATE: 10/29/2001

PATENT APPLICATION: US/09/903,199

TIME: 15:44:03

Input Set : A:\Rih32d41.app

Output Set: N:\CRF3\10292001\I903199.raw

```

140          355          360          365
142 Arg Lys Tyr Pro Gln Ser Pro Arg Ala Arg Tyr Gly Lys Ala Gln Cys
143          370          375          380
145 Glu Asp Asp Leu Ala Glu Lys Arg Arg Ser Asn Glu Val Leu Arg Gly
146 385          390          395          400
148 Ala Ile Glu Thr Tyr Gln Glu Val Ala Ser Leu Pro Asp Val Pro Ala
149          405          410          415
151 Asp Leu Leu Lys Leu Ser Leu Lys Arg Arg Ser Asp Arg Gln Gln Phe
152          420          425          430
154 Leu Gly His Met Arg Gly Ser Leu Leu Thr Leu Gln Arg Leu Val Gln
155          435          440          445
157 Leu Phe Pro Asn Asp Thr Ser Leu Lys Asn Asp Leu Gly Val Gly Tyr
158          450          455          460
160 Leu Leu Ile Gly Asp Asn Asp Asn Ala Lys Lys Val Tyr Glu Glu Val
161 465          470          475          480
163 Leu Ser Val Thr Pro Asn Asp Gly Phe Ala Lys Val His Tyr Gly Phe
164          485          490          495
166 Ile Leu Lys Ala Gln Asn Lys Ile Ala Glu Ser Ile Pro Tyr Leu Lys
167          500          505          510
169 Glu Gly Ile Glu Ser Gly Asp Pro Gly Thr Asp Asp Gly Arg Phe Tyr
170          515          520          525
172 Phe His Leu Gly Asp Ala Met Gln Arg Val Gly Asn Lys Glu Ala Tyr
173          530          535          540
175 Lys Trp Tyr Glu Leu Gly His Lys Arg Gly His Phe Ala Ser Val Trp
176 545          550          555          560
178 Gln Arg Ser Leu Tyr Asn Val Asn Gly Leu Lys Ala Gln Pro Trp Trp
179          565          570          575
181 Thr Pro Lys Glu Thr Gly Tyr Thr Glu Leu Val Lys Ser Leu Glu Arg
182          580          585          590
184 Asn Trp Lys Leu Ile Arg Asp Glu Gly Leu Ala Val Met Asp Lys Ala
185          595          600          605
187 Lys Gly Leu Phe Leu Pro Glu Asp Glu Asn Leu Arg Glu Lys Gly Asp
188          610          615          620
190 Trp Ser Gln Phe Thr Leu Trp Gln Gln Gly Arg Arg Asn Glu Asn Ala
191 625          630          635          640
193 Cys Lys Gly Ala Pro Lys Thr Cys Thr Leu Leu Glu Lys Phe Pro Glu
194          645          650          655
196 Thr Thr Gly Cys Arg Arg Gly Gln Ile Lys Tyr Ser Ile Met His Pro
197          660          665          670
199 Gly Thr His Val Trp Pro His Thr Gly Pro Thr Asn Cys Arg Leu Arg
200          675          680          685
202 Met His Leu Gly Leu Val Ile Pro Lys Glu Gly Cys Lys Ile Arg Cys
203          690          695          700
205 Ala Asn Glu Thr Arg Thr Trp Glu Glu Gly Lys Val Leu Ile Phe Asp
206 705          710          715          720
208 Asp Ser Phe Glu His Glu Val Trp Gln Asp Ala Ser Ser Phe Arg Leu
209          725          730          735
211 Ile Phe Ile Val Asp Val Trp His Pro Glu Leu Thr Pro Gln Gln Arg
212          740          745          750

```

RAW SEQUENCE LISTING

DATE: 10/29/2001

PATENT APPLICATION: US/09/903,199

TIME: 15:44:03

Input Set : A:\Rih32d41.app

Output Set: N:\CRF3\10292001\I903199.raw

214 Arg Ser Leu Pro Ala Ile

215 755

218 <210> SEQ ID NO: 3

219 <211> LENGTH: 2324

220 <212> TYPE: DNA

221 <213> ORGANISM: Homo sapiens

223 <400> SEQUENCE: 3

```

224 cggaccgtgc aatggcccag cgtaagaatg ccaagagcag cggcaacagc agcagcagcg 60
225 gctccggcag cggtagcacg agtgcgggca gcagcagccc cggggcccgagg agagagacaa 120
226 agcatggagg acacaagaat gggaggaaaag ggcgactctc gggaaacttca ttcttcacgt 180
227 ggtttatggt gattgcattg ctgggcgtct ggacatctgt agctgtcgtt tggtttgatc 240
228 ttgttgacta tgaggaaagt ctaggaaaac taggaatcta tgatgctgat ggtgatggag 300
229 attttgatgt ggtgatgccc aaagttttat taggacttaa agagagatct acttcagagc 360
230 cagcagtcgc gccagaagag gctgagccac acactgagcc cgaggagcag gttcctgtgg 420
231 aggcagaacc ccagaatata gaagatgaag caaaagaaca aattcagtc cttctccatg 480
232 aaatggtaca cgcagaacat gttgagggag aagacttgca acaagaagat ggaccacag 540
233 gagaaccaca acaagaggat gatgagtttc ttatggcgac tgatgtagat gatagatttg 600
234 agaccttga acctgaagta tctcatgaag aaaccgagca tagttaccac gtggaagaga 660
235 cagtttcaca agactgtaat caggatatgg aagagatgat gtctgagcag gaaaatccag 720
236 attccagtga accagtagta gaagatgaaa gattgcacca tgatacagat gatgtaacat 780
237 accaagtcta tgaggaaaca gcagtatatg aacctctaga aaatgaaggg atagaaatca 840
238 cagaagtaac tgctccccct gaggataatc ctgtagaaga ttcacaggta attgtagaag 900
239 aagtaagcat tttcctgtg gaagaacagc aggaagtaac accagaaaca aatagaaaaa 960
240 cagatgatcc agaacaaaaa gcaaaagtta agaaaaagaa gcctaaactt taaataaat 1020
241 ttgataagac tattaagct gaacttgatg ctgcagaaaa actccgtaaa aggggaaaaa 1080
242 ttgaggaagc agtgaatgca tttaaagaac tagtacgcaa ataccctcag agtccacgag 1140
243 caagatatgg gaaggcgagc tgtgaggatg atttggctga gaagaggaga agtaatgagg 1200
244 tgctacgtgg agccatcgag acctaccaag aggtggccag cctacctgat gtccctgcag 1260
245 acctgctgaa gctgagtttg aagcgtcgtc cagacaggca acaatttcta ggtcatatga 1320
246 gaggttccct gcttacccctg cagagattag ttcaactatt tcccaatgat acttccctaa 1380
247 aaaatgacct tggcgtggga tacctcttga taggagataa tgacaatgca aagaaagttt 1440
248 atgaagaggt gctgagtgtg acacctaatg atggctttgc taaagtccat tatggcttca 1500
249 tctgaaggc acagaacaaa attgctgaga gcatcccata tttaaaggaa ggaatagaat 1560
250 cggagatcc tggcactgat gatgggagat tttatttcca cctgggggat gccatgcaga 1620
251 gggttgggaa caaagaggca tataagtgg atgagcttgg gcacaagaga ggacactttg 1680
252 catctgtctg gcaacgctca ctctacaatg tgaatggact gaaagcacag ccttgggtga 1740
253 ccccaaaaga aacgggctac acagagttag taaagtcttt agaaagaaac tggaggttaa 1800
254 tccgagatga aggccttgca gtgatggata aagccaaagg tctcttctg cctgaggatg 1860
255 aaaacctgag ggaaaaaggg gactggagcc agttcacgct gtggcagcaa ggaagaagaa 1920
256 atgaaaatgc ctgcaaagga gctcctaaaa cctgtacctt actagaaaag tccccgaga 1980
257 caacaggatg cagaagagga cagatcaaat attccatcat gcaccccggg actcacgtgt 2040
258 ggccgcacac agggcccaca aactgcaggc tccgaatgca cctgggcttg gtgattccca 2100
259 aggaaggctg caagattcga tgtgccaacg agaccaggac ctgggaggaa ggcaagggtg 2160
260 tcatctttga tgactccttt gagcacgagg tatggcagga tgctcatct ttccggctga 2220
261 tattcatcgt ggatgtgtgg catccggaac tgacaccaca gcagagacgc agccttccag 2280
262 caatttagca tgaattcatg caagcttggg aaactctgga gaga 2324

```

265 <210> SEQ ID NO: 4

266 <211> LENGTH: 31

267 <212> TYPE: PRT

RAW SEQUENCE LISTING

DATE: 10/29/2001

PATENT APPLICATION: US/09/903,199

TIME: 15:44:03

Input Set : A:\Rih32d41.app

Output Set: N:\CRF3\10292001\I903199.raw

268 <213> ORGANISM: Artificial Sequence
 270 <220> FEATURE:
 271 <223> OTHER INFORMATION: Description of Artificial Sequence: EGF-like
 272 cysteine-rich repeat
 274 <220> FEATURE:
 275 <221> NAME/KEY: VARIANT
 276 <222> LOCATION: (3)..(5) ✓
 277 <223> OTHER INFORMATION: Wherein any Xaa may be any amino acid
 279 <220> FEATURE:
 280 <221> NAME/KEY: VARIANT
 281 <222> LOCATION: (6)..(7) ✓
 282 <223> OTHER INFORMATION: Wherein Xaa is any amino acid.
 284 <220> FEATURE:
 285 <221> NAME/KEY: VARIANT ✓
 286 <222> LOCATION: (10)
 287 <223> OTHER INFORMATION: Wherein Xaa is any amino acid.
 289 <220> FEATURE:
 290 <221> NAME/KEY: VARIANT
 291 <222> LOCATION: (14) ✓
 292 <223> OTHER INFORMATION: Wherein Xaa is any amino acid.
 294 <220> FEATURE:
 295 <221> NAME/KEY: VARIANT
 296 <222> LOCATION: (17)..(18)
 298 <220> FEATURE:
 299 <221> NAME/KEY: VARIANT
 300 <222> LOCATION: (25)..(26) ✓
 301 <223> OTHER INFORMATION: Wherein Xaa is any amino acid.
 303 <220> FEATURE:
 304 <221> NAME/KEY: VARIANT
 305 <222> LOCATION: (29)
 306 <223> OTHER INFORMATION: Wherein Xaa is any amino acid.
 308 <400> SEQUENCE: 4

W--> 309 Cys Asp Xaa Xaa Xaa Cys Xaa Xaa Lys Xaa Gly Asn Gly Xaa Cys Asp
 310 1 5 10 15

W--> 312 Xaa Xaa Cys Asn Asn Ala Ala Cys Xaa Xaa Asp Gly Xaa Asp Cys
 313 20 25 30

316 <210> SEQ ID NO: 5

317 <211> LENGTH: 1242

318 <212> TYPE: PRT

319 <213> ORGANISM: Homo sapiens

321 <400> SEQUENCE: 5

322 Met Ala Ser Pro Pro Glu Ser Asp Gly Phe Ser Asp Val Arg Lys Val

323 1 5 10 15

325 Gly Tyr Leu Arg Lys Pro Lys Ser Met His Lys Arg Phe Phe Val Leu

326 20 25 30

328 Arg Ala Ala Ser Glu Ala Gly Gly Pro Ala Arg Leu Glu Tyr Tyr Glu

329 35 40 45

331 Asn Glu Lys Lys Trp Arg His Lys Ser Ser Ala Pro Lys Arg Ser Ile

332 50 55 60

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/903,199

DATE: 10/29/2001

TIME: 15:44:04

Input Set : A:\Rih32d41.app

Output Set: N:\CRF3\10292001\I903199.raw

L:57 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:63 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:309 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:312 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4